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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/804,556	03/12/2001	Jim Sundqvist	45687-00053 P5262US00/AE	1305

27045 7590 08/16/2004

ERICSSON INC.
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EXAMINER	
ZHONG, CHAD	
ART UNIT	**PAPER NUMBER**
2152	6

DATE MAILED: 08/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/804,556	SUNDQVIST, JIM	
	Examiner	Art Unit	
	Chad Zhong	2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 2.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-33 are presented for examination.

2. It is noted that although the present application does contain line numbers in specification and claims, the line numbers in the claims do not correspond to the preferred format. The preferred format is to number each line of every claim, with each claim beginning with line 1. For ease of reference by both the Examiner and Applicant all future correspondence should include the recommended line numbering.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2, 4-5, 6, 8-9, 11, 12-13, 15-16, 17, 25-28, 29, 31-33 are rejected under 35 U.S.C. 102(b) as being anticipated by NLANR: Engineering Services (hereinafter NLANR), 1999. Note, that this is a packet of documents, for easy reference, the examiner will refer to particular "article – section – lines" in that order as stated in the following office action.

5. As per claim 1, NLANR teaches a method for controlling data flows to a terminal in a communications system which handles real-time application flows and non real-time application flows, said data flows being carried over at least one communications terminal with a predetermined limited bandwidth and with use of at least one protocol, said method comprising the steps of:

receiving, in the terminal, a set-up message for a real-time application communications session (General Comments on Tuning – Setting TCP Buffer Space – pg 1, lines 5-11; A User's Guide to TCP

Windows – Testing Bandwidth – lines 5-15);

deriving from information in the set-up message a required bandwidth which is required on the communications connection for the real-time application flow to the terminal to be set up in connection with the communications session (General Comments on Tuning – Setting TCP Buffer Space – pg 1, lines 5-15; A User's Guide to TCP Windows – Testing Bandwidth – pg 1-2, lines 5-15);

controlling, through manipulation of at least one protocol parameter, a bandwidth usage on the communications connection of at least one data flow to a non real-time application on the terminal so as to ensure that said required bandwidth is instantly available to said real-time application flow when it is set up (A User's Guide to TCP Windows – Testing Bandwidth – lines 5-15; Other Bottlenecks and Resource Limits – Confirm that there are no losses – pg 1, lines 10-12; Other Bottlenecks and Resource Limits – Checking for receiver limits – pg 2, lines 1-5).

6. As per claim 2, NLANR teaches a method according to claim 1, wherein the controlling step involves reducing the bandwidth usage on the communications connection of the at least one data flow to a non real-time application in order to free bandwidth on the communications connection for the real-time application flow to be set up (Other Bottlenecks and Resource Limits – Confirm that there are no losses – pg 1, lines 10-12; Other Bottlenecks and Resource Limits – Checking for receiver limits – pg 2, lines 1-5; Other Bottlenecks and Resource Limits – Checking for receiver application limits – pg 2, lines 1-5; Other Bottlenecks and Resource Limits – Checking for other path limits – pg 2, lines 4-9).

7. As per claim 4, NLANR teaches a method according to claim 1, wherein by controlling the bandwidth usage of the at least one data flow to a non real-time application flow comprises:

investigating if a data packet to be sent from the terminal is an acknowledgment packet;

if the data packet is an acknowledgment packet, determining by comparing a window size of the acknowledgment packet to information based on said required bandwidth if the window size should be

reduced, which window size defines a maximum amount of unacknowledged data packets that a receiver of the acknowledgment packet should be allowed to send to the terminal on the data flow with which the acknowledgment packet is associated; and

reducing the window size, when such has been determined, by overwriting the window size with a lower value before sending said acknowledgment packet to the receiver (A User's Guide to TCP Windows – Testing Bandwidth – lines 5-15; Other Bottlenecks and Resource Limits – Checking for sender limits – pg 3, lines 4-10; General Comments on Tuning – Setting TCP Buffer Space – pg 1, lines 5-15).

8. As per claim 5, NLANR teaches a method according to claim 4, wherein the step of reducing the window size comprises overwriting the window size when the acknowledgment packet is in a transport layer (General Comments on Tuning – Setting TCP Buffer Space – pg 1, lines 5-15).

9. As per claim 8, Claim 8 is rejected for the same reasons as rejection to claim 1 above.

10. As per claim 9, Claim 9 is rejected for the same reasons as rejection to claim 2 above.

11. As per claim 11, Claim 11 is rejected for the same reasons as rejection to claim 4 above.

12. As per claims 12-13, 15-16, Claims 12-13 and 15-16 are rejected for the same reasons as rejection to claims 1-2 and 4-5 above respectively.

13. As per claims 25-28, Claims 25-28 are rejected for the same reasons as rejection to claims 1-2, 4-5 above respectively.

14. As per claims 31-33, claims 31-33 are rejected for the same reasons as rejection to claims 1-2, and 4 above respectively.

15. As per claims 6, 17 and 29, NLANR teaches a method according to claim 4, wherein the step of reducing the window size comprises overwriting the window size when the acknowledgment packet is in an Internet layer (Enabling High Performance Data Transfers on Hosts – pg 2, lines 1-10; pg 6, lines 20-26).

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

16. Claims 3, 10, 14, 19-22, 23, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over NLANR: Engineering Services (hereinafter NLANR), 1999, in view of Multiparty Multimedia Session (hereinafter mmusic), Oct, 1999.

17. As per claim 3, NLANR teaches a method according to claim 1 including the step of, after receiving said set-up message and deriving information regarding said required bandwidth from information in the set-up message,
the real-time application providing a flow control application with information regarding the required bandwidth; and using the flow control application for controlling the bandwidth usage of the at least one data flow to a non real-time application based on said information received from the real-time application. The above sited sections are rejected for the same reasons as rejection to claim 1 above.

18. NLANR does not explicitly teaches using an encoding method in the real-time communications session.

19. mmusic teaches using an encoding method in the real-time communications session (pg 4, SIP/SDP Call setup for realtime fax over IP).

20. It would have been obvious to one of ordinary skill in this art at the time of invention was made to combine the teaching of NLANR and mmusic because they both dealing with transmission of messages within the network system. Furthermore, the teaching of mmusic to allow
encoding method in the real-time communications session
would improve the efficiency for AAPA's system by allowing NLANR's system to operate under real time. Although NLANR's system does not explicitly teaches "real time" operations, the operating system capable of communications sessions are all real time capable, i.e. freebsd and unix operations systems.

21. As per claim 10, 14, 19, 21, 23-24, Claims 10, 14, 19, 23-24 are rejected for the same reasons as rejection to claim 3 above.

22. As per claim 20, 22, claims 20 and 22 are rejected for the same reasons as rejection to claims 2 and 4 above respectively.

23. Claims 7, 18, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over NLANR: Engineering Services (hereinafter NLANR), 1999, in view of 'Official Notice'.

24. As per claims 7, 18 and 30, NLANR does not explicitly teaches a method according to claim 4, wherein the step of reducing the window size comprises overwriting the window size when the acknowledgment packet is in a physical layer. "Official Notice" is taken that the concept and advantages of providing for reducing the window size by overwriting the window size when the acknowledgement packet is in a physical layer is well known and expected in the art. It would have been obvious to one of ordinary skill in the art to include reducing the window size by overwriting the window size when the acknowledgement packet is in a physical layer with NLANR because it would provide for flow control at

various different OSI layers other than TCP and IP. Further, as applicant pointed out in the specification, changing the window size is a TCP functionality and the optimum method of changing the window size should be done at the TCP layer, extending this functionality to other layers would require re-calculation of checksum values thus leading to unnecessary overhead. Thus extending TCP layer functionality to various other layers is obvious and expected in the art as is taught by NLANR (see item 15 of this office action for additional details).

Conclusion

25. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents and publications are cited to further show the state of the art with respect to "Method And Arrangement For Control Of Non Real-Time Application Flows In A Network Communications System".

i. "BTU: A communication Benchmark Proposal" – Maly et al. June 1995

ii. US 5193151 Jain

iii. "Decoupling Control From Data for TCP Congestion Control" Shie-Yuan Wang September 1999.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chad Zhong whose telephone number is (703) 305-0718. The examiner can normally be reached on M-F 7am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A Follansbee can be reached on 703-305-8498. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

CZ
May 27, 2004

JOHN FOLLANSBEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100